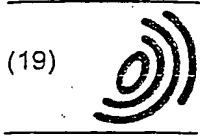


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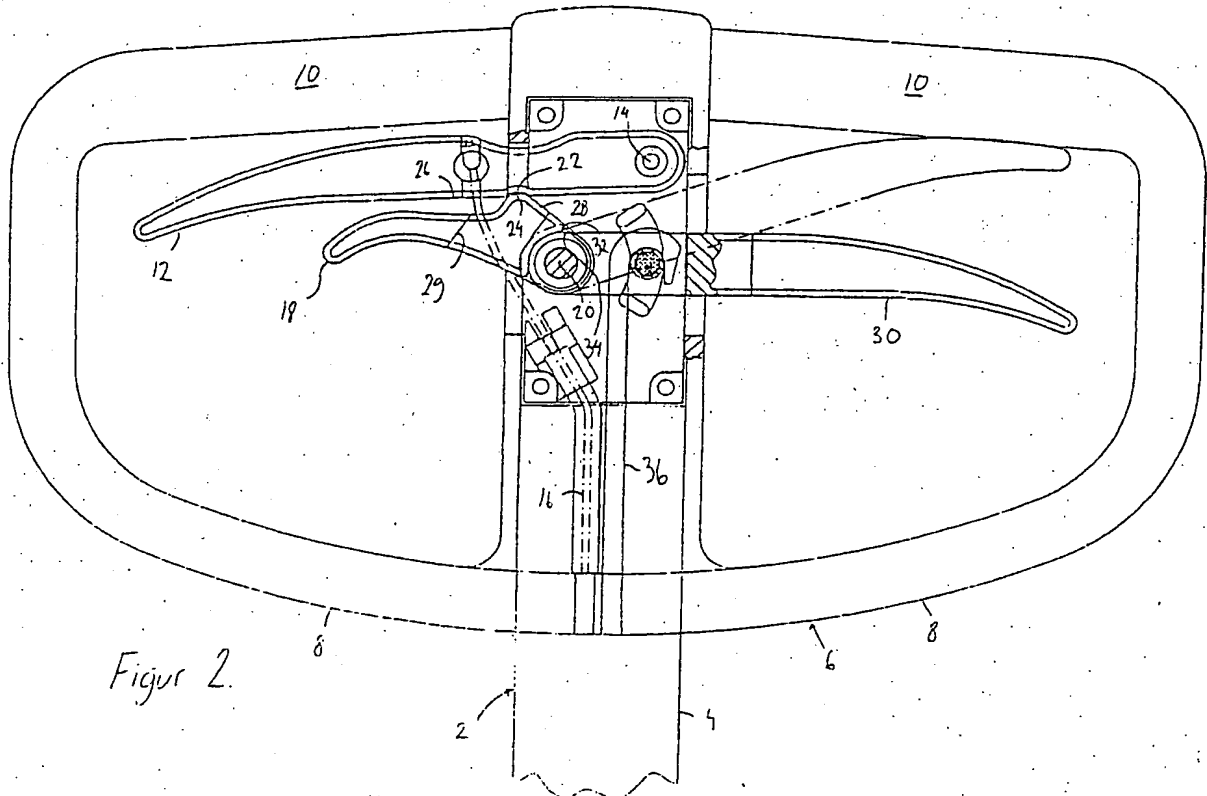
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(54) Brake for a hand truck

(57) Arrangement for brake actuation of a hand truck operated by a tiller 4 provided with a handle (6) in which a first lever (12) is pivotally journaled. This first lever is via a wire (16) or the like connected to a brake means, and movement of the first lever (12) influence the brake means between the braking and the releasing

positions, said first lever (12) being biased towards the brake releasing position. A second lever (18) is also pivotally journaled in the handle (6). The first and second levers (12, 18) include respective mechanical lock parts (22, 24) arranged to cooperate with each other so that the first lever (12) is locked when the first and second levers (12, 18) are in the braking position.



Figur 2.

iment coincide with the second axle 20. It is possible with an embodiment with two separate axles, but this will be difficult to achieve with regard to the available space and at the same time the number of parts increase. The third lever 30 acts on a pull rod 36 that in turn acts on a lowering valve (not shown) for the load carrier of the hand truck, normally load forks, in a manner known per se.

[0016] The invention is thus focused on the presence of the second lever 18 that is used to lock the first lever 12 in the braking position in order to achieve a parking brake function that is described below.

[0017] In fig 1 the first and second levers 12, 18 are shown in their respective releasing positions influenced by not shown spring means. When the operator wish to brake the truck he will in the normal manner pull the first lever 12 towards the grip part 10 at which the spring force is overcome and the brake is activated. When the operator then releases the lever 12 the brake is released.

[0018] When the operator wish to activate the parking brake this is achieved by pulling the second lever 18 towards the braking position shown in fig 2. This will also automatically bring the first lever 12 to its braking position. The second lever 18 includes a locking part 24 in the shape of a protrusion that in the braking position cooperates with a corresponding locking part 22 of the first lever in the shape of a cooperating recess. The friction force between the cooperating locking parts 22, 24 thereby overcomes the spring pretension and the levers 12, 18 retain the braking position shown in fig 2 even after being released by the operator and a parking brake function is achieved.

[0019] The parking brake may then be released by depressing the second lever 18 with a finger towards the position shown in fig 1 so that the locking is released and the levers returned to the brake release position.

[0020] An alternative release procedure also exist. The third lever 30 includes an actuation part 34 that cooperates with an actuation part 32 of the second lever 18 so that this is influenced towards its release position when the third lever 30 is pulled towards the grip part 10 (dashed position in fig 2.) This means in the shown embodiment also that the pull rod 36 actuate the lowering valve so that it opens. In other words the lowering of a pallet automatically release the parking brake if this is active.

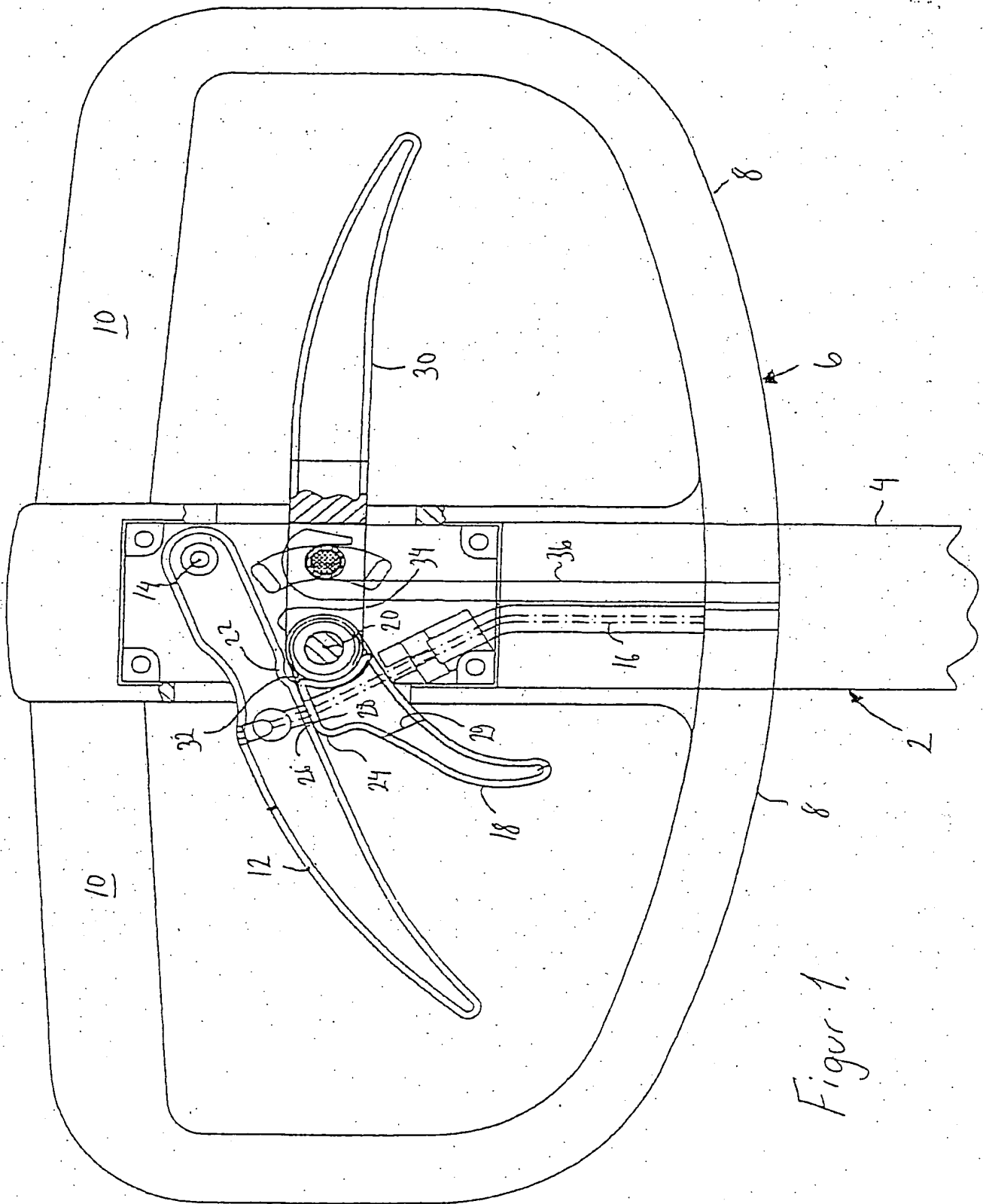
[0021] The first and second levers 12, 18 are preferably provided with cooperating contact surfaces 26, 28 that are in contact with each other in the released position. This provides in addition to a good function also an aesthetically appealing shape. Furthermore the space in the upper part of the tiller arm where the levers 12, 18, 30 are fastened is preferably covered by a cover or panel that for the sake of clarity has been left out of the figures.

[0022] The invention can within the frame of the patent claims be executed in accordance with a number of

alternative embodiments other than the ones described above. Thus one can for instance vary the shape and location of the levers and their cooperating parts.

Claims

1. Arrangement at the brake of a hand truck or the like including a tiller (4) with a handle (6), a first lever (12) pivotally journalled on a first axle (14) in the handle (6), said lever (12) being via a wire (16) or the like connected to a brake means; movement of the first lever (12) influence the brake means between a braking and a released position, the first lever (12) is by a spring means biased towards a release position, characterized in that a second lever (18) is pivotally journalled in the handle (6) on a second axle (20) essentially parallel to the first axle (14), said second lever 18 is moveable between the braking and the release positions, that the first and second levers (12, 18) includes respective mechanical locking parts (22, 24) arranged to cooperate with each other so that the locking parts (22, 24) are free from each other in the release position of the second lever (18) while the locking parts (22, 24) cooperates, when the first and second levers, (12, 18) are in the braking position, in such a way that the spring force of the spring means is overcome and the first lever (12) is locked in its braking position.
2. Arrangement according to claim 1, characterized in that the distance between the first axle (14) and the locking part (22) of the first lever is greater than the distance between the second axle (20) and the locking part (24) of the second lever.
3. Arrangement according to claim 1 or 2, characterized in that the locking part (24) of the second lever is constituted of a protrusion and the locking part (22) of the first lever is constituted of a recess cooperating with the protrusion (24).
4. Arrangement according to any of the claims 1 to 3, characterized in that the levers (12, 18) includes cooperating contacts surfaces (26, 28) that are in contact with each other in the released position of the levers (12, 18).
5. Arrangement according to any of the claims 1 to 4, characterized in that the wire (16) runs through an opening (29) in the second lever (18).
6. Arrangement according to any of the claims 1 to 5, characterized in that the third lever (30) is journalled in the handle (6) on a third axle (20) essentially parallel with the first and second axles (14, 20), which third lever (30) includes an actuation part (34)



Figur 1.